Small Business Innovation Research/Small Business Tech Transfer

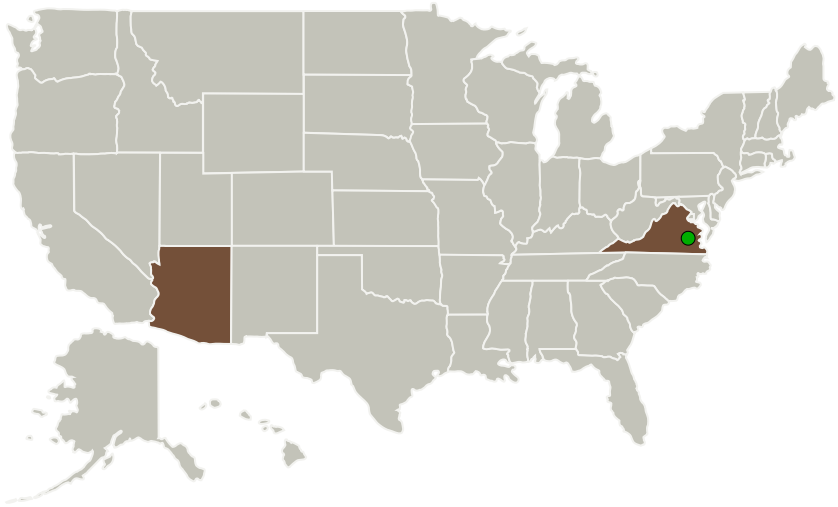
Frequency-Locked Single-Frequency Fiber Laser at 2 Micron, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

Based on our proprietary fiber technology and extensive experience in fiber laser development, a new single-frequency 2Ým fiber laser source will be developed. The source includes advanced frequency-locking schemes for both center-line locking and offset-frequency locking, so as to address the bandwidth issue associated with airborne and space-borne coherent lidar, i.e., Active Sensing of CO2 Emissions over Nights, Days, and Seasons.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
AdValue Photonics, Inc.	Lead Organization	Industry Small Disadvantaged Business (SDB)	Tucson, Arizona
Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations	
Arizona	Virginia

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Table of Contents

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Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/140192)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

AdValue Photonics, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Jihong Geng

Co-Investigator:

Jihong Geng

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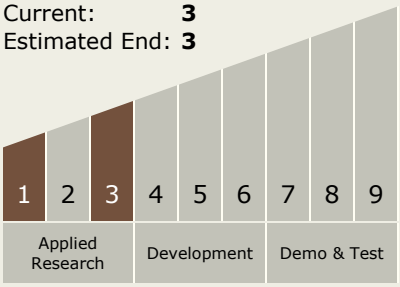
Technology Maturity (TRL)

Start: **1**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX08 Sensors and Instruments
  - TX08.1 Remote Sensing Instruments/Sensors
    - TX08.1.5 Lasers

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System